

A NEW SPECIES OF *GRYLLITA*  
(GRYLLOPTERA: GRYLLIDAE) FROM  
BAJA CALIFORNIA, MEXICO

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*Abstract.*—A new species of *Gryllita* Hebard, *G. weissmani* NEW SPECIES, is described from Baja California Sur, Mexico. It is compared with its closest relative, *G. arizonae* Hebard, the type species of the genus.

*Key Words.*—Insecta, Grylloptera, Gryllidae, *Gryllita weissmani*, Baja California

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Randell (1964a) placed the genus *Gryllita* in the subtribe Scobiina of the tribe Gryllinae, based upon the male internal genitalic structures.

The genus *Gryllita* was erected by Hebard (1935) for his new species *G. arizonae* Hebard from Arizona, and for two Mexican species *G. tolteca* (Saussure) from Córdoba and *G. forcipata* (Saussure) from Guerrero. Both *tolteca* and *forcipata* were placed in a new genus *Urogryllus* by Randell (1964a). Hebard (1935) mentioned three more undescribed species from Costa Rica, but these apparently have not been described. Later, Randell (1964b) described three additional species, *G. arndti* Randell, *G. bondi* Randell, and *G. uhleri* Randell, all from Haiti. I have not investigated these species that may or may not belong in *Gryllita*. The species described here from Baja California, Mexico, is more closely related to the type species, *G. arizonae*, but is clearly distinguishable and is widely separated from it, because the new species occurs only in the southern part of Baja California Sur, and *G. arizonae* is not known from the northern part of the peninsula. The specimens studied are part of the collection of orthopteroid insects assembled by D. B. Weissman for the study of this group of insects in Baja California, Mexico.

*Depository Abbreviations.*—California Academy of Sciences, San Francisco, California (CAS); San Diego Museum of Natural History, San Diego, California (SDM); California State University at Long Beach, Long Beach, California (CSLB); Lyman Entomological Museum, McGill University, Quebec (LEM).

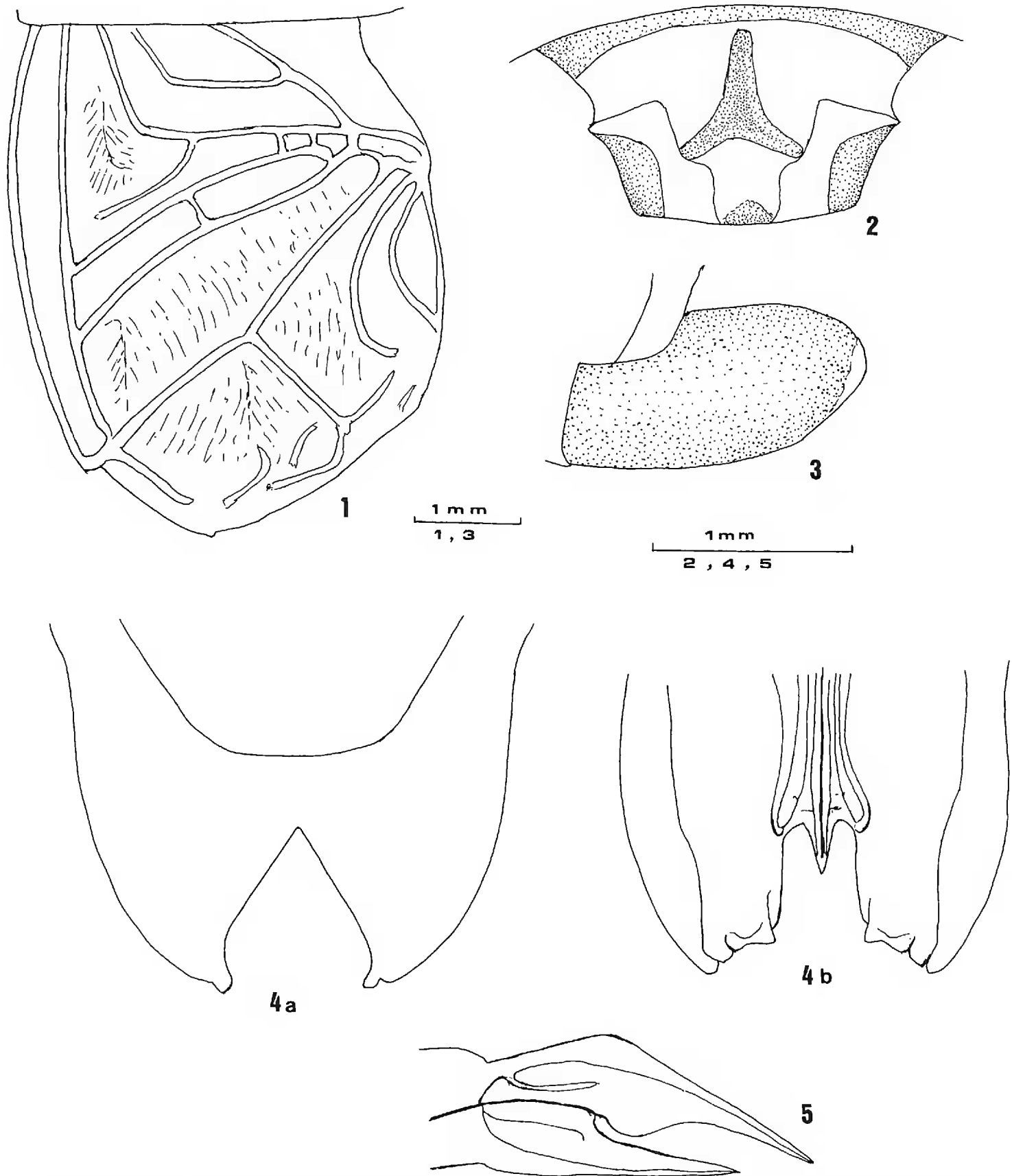
*GRYLLITA WEISSMANI* NEW SPECIES

(Figs. 1–5)

*Types.*—*Holotype*, male, deposited in the California Academy of Sciences (CAS Type No. 16822), data: MEXICO. BAJA CALIFORNIA SUR: 5 km N of Los Barriles, at “Km 114.8” on highway, 4 Jan 1979, D. B. Weissman, R. E. Love, V. Lee, C. Mullinex, #79-28. *Allotype*, female, same data as holotype. *Paratypes*: MEXICO. BAJA CALIFORNIA SUR: ca 14 km E of Mex hwy 9 on road to La Burrera, 1 Jan 1979, D. B. Weissman, R. E. Love, V. Lee, C. Mullinex, #79-19. 4 males, 13 females (CAS) (1 female retained LEM); 19.5 km N of Todos Santos

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Figures 1-5. *Gryllita weissmani*. Figure 1. Left tegmen of male Paratype. Figure 2. Male supraanal plate, postero-dorsal aspect, Paratype. Figure 3. Male subgenital plate, lateral aspect, Holotype. Figure 4. Male Genitalia, Paratype: 4a. dorsal view of epiphallus; 4b. ventral view showing ectophallic lobes. Figure 5. Ovipositor of female Paratype; length of illustrated part 1.9 mm.

at km 30 on Mex hwy 9, 1 Jan 1979. D. B. Weissman, R. E. Love, V. Lee, C. Mullinex, #79-18. 1 male, 1 female (CAS); ca 44 km NW of La Paz, at 0.2 km S of "km 44" on Mex hwy 1, 31 Dec 1978. D. B. Weissman, R. E. Love, V. Lee, C. Mullinex, #79-14. 1 female (CAS); 7.8 km N of Cabo San Lucas at "km 7.8" on Mex hwy 1, 2 Jan 1979. D. B. Weissman, R. E. Love, V. Lee, C. Mullinex, #79-23, 4 males, 1 female (CAS) (1 male retained in LEM); first wash on road to

Miraflores off Mex hwy 1, 3 Jan 1979, D. B. Weissman, R. E. Love, V. Lee, C. Mullinex, #79-27. 1 male (CAS); 6.7 km (4.2 mi) W of Miraflores, 30 Sep 1981, F. Andrews, D. Faulkner. 1 male (SDM); 5 km N of Barriles at "km 114.8" on hwy, 4 Jan 1979, D. B. Weissman, R. E. Love, V. Lee, C. Mullinex, #79-28, 1 male, 2 females (CAS); 10 km N of La Paz, 17 Nov 1974, (OR 7) [D.] Otte. 2 males (ANSP); Cabo San Lucas, 17 Sep 1974, (OR 11-12), [D.] Otte. 1 male (ANSP); 1.6 km (1 mi) W of La Burrera, 457 m (1500 ft), 17/18 Oct 1968, E. L. Sleeper, F. J. Moore, 1 male (CSLB); 9.6 km (6 mi) E of San Jose del Cabo, 609 m (2000 ft), 26/27 Oct 1968. E. L. Sleeper, F. J. Moore, 2 males (CSLB); Sta Victoria, 11.2 km (7 mi) W of Santiago, 30/31 Oct 1968, E. L. Sleeper, F. J. Moore, blacklite. 1 male (CSLB); 5.6 km (3.5 mi) SW of San Bartolo, 487 m (1400 ft), 31 Oct 1968, E. L. Sleeper, F. J. Moore, 1 male (CSLB); El Triunfo, 550 m, 22 Nov 1977. E. S. Ross, 2 males (CAS); 4.8 km (3 mi) N of San Antonio, 9/10 Oct 1968, 366 m (1200 ft), E. L. Sleeper, F. J. Moore, 1 female (in alcohol) (CSLB).

*Description.*—*Male* (Holotype). *Head*: not swollen, slightly narrower than anterior margin of pronotum; eyes not prominent, frons protruding between antennal sockets; antennae nearly as long as body, tip of right antenna broken; head black except pale ocelli, brown mandibles, pale apical margins of clypeus and labrum; eyes grey, mottled black. *Pronotum*: broader than long, anterior margin concave, posterior margin nearly truncate; median longitudinal sulcus only slightly impressed. *Tegmina*: (Fig. 1) short but longer than broad, dorsal fields flat; 2 oblique veins present; mirror without cross-vein; posterior margin somewhat obscured by reticulation on lateral fields, dark with second longitudinal vein brown; left tegmen removed, in gelatin capsule on pin; wings absent; stridulatory vein ( $n = 3$ ) 1.85 (1.67–2.19) mm long, curved at extremity, 56 (53–61) file teeth, 30.3 (24.2–36.5) per mm. *Legs*: right middle leg missing; anterior tibiae with 3 apical spurs, mesad spur  $2.0 \times$  length of lateral spur, hearing organ on lateral face only; hind tibiae with rows of 6 paired spines plus 2 apical spurs, mesad spines and spurs longer than opposite lateral spurs; hindbasitarsus with paired short ventral spines. *Abdomen*: extends well beyond apices of tegmina, 4 + terga visible; supra-anal plate as in Fig. 2 but much darker basally; subgenital plate deep, elongate, broadly rounded apically, 3 mm long, 1.8 mm deep (Fig. 3). *Genitalia*: similar to *Gryllita arizonae* with bridge of epiphallus narrow (Fig. 4a), emargination of anterior margin broad, of posterior margin deeper, narrower with epiphallic lobes prominent [more than on *G. arizonae* (Randell 1964a: 1590, figs. 24a, 24b, 24c)]; in ventral view, apices of the ectoparameres shallowly divided into 3 lobes, the laterad lobe longer than mesad lobes (Fig. 4b) [opposite of the condition in *G. arizonae*]. *Measurements* ( $x +$  range,  $n = 10$ ): Body length, 15 (13.2–17.2) mm; head width, 3.4 (3.1–3.7) mm; pronotum length, 2.8 (2.5–3.1) mm; pronotum width, 3.9 (3.8–4.2) mm; tegmen length (exposed part *in situ*) 5.7 (5.0–6.4) mm; forefemur length, 3.1 (2.8–3.5) mm; foretibia length, 2.8 (2.4–3.1) mm; hindfemur length, 8.2 (7.3–8.8) mm; hindtibia length, 5.3 (4.8–5.6) mm.

*Female* (Allotype).—Similar to male but completely apterous. *Head*: antennae longer than body including ovipositor; head and pronotum together broadly rounded anteriorly, head narrower than anterior margin of pronotum; eyes not prominent; color as male, mandibles and genae mahogany brown. *Pronotum*: flat dorsally, generally barrel-shaped in dorsal view; anterior margin broadly concave, posterior margin slightly convex, sides rounded, width of anterior and posterior margins about equal; shining black; median longitudinal sulcus only slightly impressed; apterous; (fore legs glued to card). *Abdomen*: broadening from segment 1 to segment 6, then narrowing to apex, terga 9 and 10 very narrow; terga 3 to 7 with very narrow brown posterior margins; ovipositor straight, directed dorsally, dorsal valves bent abruptly downward to acute apex, ventral valves shorter with acute apices (Fig. 5); subgenital plate small, scoop-shaped. *Legs*: all femora unarmed; foretibia with 3 apical spurs, midtibia with 4 apical spurs, hindtibia with 5 + 5 large ventral spines, mesad spines slightly longer than lateral spines, 4 long and 2 short apical spurs; hind basitarsus with 6 + 6 short, blunt spines and 2 apical spines. *Measurements* ( $x +$  range,  $n = 10$ ): Body length (less ovipositor), 15.1 (12.8–19.0) mm; head width, 3.7 (3.4–4.4) mm; pronotum length, 3.3 (2.6–3.4) mm; pronotum width, 3.9 (3.5–4.9) mm; forefemur length, 3.2 (2.9–3.9) mm; foretibia length, 2.8 (2.6–3.4) mm; hindfemur length, 8.3 (7.4–9.6) mm; hindtibia length, 5.4 (5.4–8.8) mm; ovipositor length, 6.4 (5.4–8.8) mm.

*Diagnosis.*—*Gryllita weissmani* NEW SPECIES is slightly larger than *G. arizonae*, but the visible part of the tegmen is shorter (5.0–6.4 mm for the former, 7.1–7.7 mm for the latter); legs are shorter in both sexes than the figures given by Hebard (1935). The hindfemur length of *G. arizonae* males ranged from 8.3–9.2 mm, and females from 9.3–9.5 mm, as compared with *G. weissmani* males at 7.3–8.8 mm and females at 7.4–9.6 mm. The pronotum of *G. arizonae* males is 2.7 mm long by 3.8 mm wide, with females 3.3–3.5 mm by 3.8–4.7 mm, both slightly greater than in *G. weissmani*. The ovipositor of *G. weissmani* females averages 6.4 mm, considerably shorter than in *G. arizonae* at 9.0 mm. Comparison of male genitalia of *Gryllita weissmani* with the figures of Randell (1964: figs. 24a, 24b, 24c) reveals that that it belongs in *Gryllita* rather than in *Urogryllus* (Randell 1964: figs. 9a, 9b).

*Discussion.*—This species has been collected in the adult stage from September to January. It may occur earlier and later. No collections are known to have been made in the region in February. No specimens were found in late April, 1977, and no collections were made in March (D. B. Weissman, personal communication). It occurs only in the extreme southern part of Baja California Sur. The most northerly collection is 44 km northwest of La Paz, and another collection is from 10 km north of La Paz. All other collections are from south of La Paz.

*Etyymology.*—The species is named for David B. Weissman, the organizer of the project on orthopteroid insects of Baja California, and who also collected many of the specimens.

*Material Examined.*—See types.

#### LITERATURE CITED

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